<u>REMARKS</u>

Claims 1-19 are all the claims pending in the application. Claims 1-7, 9-13, and 15-19

stand rejected as being anticipated by Kamegawa et al. (U.S. Patent No. 5,710,718). Claims 8

and 14 stand rejected as being unpatentable over Kamegawa et al. in view of Tang (U.S. Patent

No. 6,061,673).

Applicants have amended the claims to more clearly define the feature of "neural

conversion" use in exemplary embodiments of the present invention. Applicants respectfully

submit that Kamegawa deals with the optimization of a solution space having an extreme value,

as illustrated in Fig. 8 of Kamegawa. In contrast, the present invention relates to the

optimization of a solution space having multiple extreme values, as shown in Fig. 9. In other

words, the conversion system *neural* network of the present invention requires design parameters

via the optimization calculations of a solution space having multiple extreme values. Kamegawa

does not relate to the optimization of a solution space having multiple extreme values, as seen in

the present invention.

In this technical field, it is common knowledge that the term linear optimization refers to

the optimization of a solution space having an extreme value; whereas non-linear optimization

refers to the optimization of a solution space having multiple extreme values. Applicants have

amended the claims to define the neural conversion feature to achieve the non-linear

optimization.

Regarding the Tang reference, as seen in the flowchart of Fig. 5 of the present

application, the processing conducted in the present invention from start to step 130 involves

using a *neural* network to estimate the number of extreme values of a solution space. In step 132,

the genetic algorithms and linear planning method of Kamegawa are employed in the optimization.

The Examiner indicates that using the invention recited in Tang in order to modify the invention recited in Kamegawa '718 constituted, at the time of invention, an easy matter for those skilled in the art. Applicants submit that even if, for example, the genetic algorithm of Kamegawa '718 was modified into a multi-layered feed forward type neural network, it is not possible to perform the optimization shown in step 132 of the present invention. For this reason, Applicants submit that the Examiner's argument is technically incorrect with regards to Tang.

Finally, Applicants note that neural networks and optimization belong to different technological fields, and the combination and non-linear optimization of these is what constitutes the conception behind the present invention. Accordingly, it would be difficult even for those skilled in the art to conceive of this combination as used in the present invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

Ronald Kimble
Registration No. 44,186

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: September 22, 2005